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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,420	03/12/2004	Yung-yu Chiu	Q1198	7129
34335	7590	11/23/2005	EXAMINER	
PAI PATENT & TRADEMARK LAW FIRM 1001 FOURTH AVENUE, SUITE 3200 SEATTLE, WA 98154			LE, DANG D	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

<b>Office Action Summary</b>	<b>Application No.</b> 10/799,420	<b>Applicant(s)</b> CHIU ET AL.	
	<b>Examiner</b> Dang D. Le	<b>Art Unit</b> 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 15-22 and 24-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 23, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 9/22/05 have been fully considered but they are not persuasive.

Regarding claim 5 and the Schmider et al. reference, Schmider et al. clearly shows the bearing assembly (12) and the shaft (13) protrude outwardly from the bottom surface of the fan base (1) in Figures 1 and 2 because the shaft contacts the thrust plate (3).

Regarding claim 1 and Hishida et al. and Muller, although Hishida et al. does not show a groove formed on the shaft end, Muller shows the feature in Figure 1. In the art of motor and generator, it is well known to form groove on the shaft end for the purpose of increasing the mechanical strength. See Figure 1 of Taniguchi et al. (6,137,197), Figures 1 and 9 of Matsumoto (5,925,948), and Figures 3 and 4 of Lin et al. (6,107,717), Figure 1 of Fehrenbacher et al. (6,013,966), and Figure 3 of Horng (6,040,649).

As a result, the rejection of claims 5-11 and 28 is still deemed proper and repeated hereinafter. The rejection of claims 1-4 and 27 is also retained.

2. Applicant's arguments with respect to claims 12-14 and 23 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 5-11 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmider et al. (5,176,509).

Regarding claim 5, Schmider et al. shows a fan motor structure (Figure 5), comprising:

- A stator (10), which comprises:
- A fan base (1); and
- A bearing assembly (12) mounted on the fan base; and
- A rotor (14, 15), which comprises:
- A fan hub (2) formed with an extrusion (around 13) protruding from an outer planar surface of the fan hub; and
- A shaft (13) fit into the bearing assembly (12) and connected to the fan hub, the bearing assembly (12) and the shaft both protruding outwardly from the bottom surface (bottom, near 12 in Figure 2) of the fan base (1), and the shaft having one part (near 13) enclosed by the extrusion of the fan hub.

Regarding claims 6, 8-10, and 28, it is noted that Schmider et al. also shows all of the limitations of the claimed invention.

Regarding claim 7, it is noted that Schmider et al. also shows an extrusion protruding from the bottom planar surface of the fan hub (near and below 14).

Regarding claim 11, it is noted that Schmider et al. also shows the bearing seat (11).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-4 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hishida et al. (5,160,866) in view of Muller (Re. 34,268).

Regarding claim 1, Hishida et al. shows a motor structure, comprising:

- A stator (218), which comprises:
- A base (208);
- A bearing assembly (210, 216) mounted on the fan base; and
- A rotor (206), which comprises:
- A hub (222) formed with an extrusion (Figure 9) protruding from a top planar surface (216) of the hub; and

- A shaft (204) fit into the bearing assembly and connected to the hub, the shaft having one end (top) protruding from the top planar surface of the fan hub to form an extension portion enclosed by and in close connection with the extrusion of the hub;
- Wherein the height of the extension portion is approximately equal to the height of the extension of the hub (Figure 9).

Hishida et al. does not show the motor being a fan motor and a groove formed on the shaft end.

Muller shows the motor can be easily made either for rotating a recording disk (Figure 1) or for rotating a fan impeller (Figures 2-5) for the purpose of reducing heat. Muller also forms a groove on the shaft end (Figure 1) for the purpose of increasing mechanical strength.

Since Hishida et al. and Muller are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the motor as a fan motor by adding the fan blade on the rotor hub and include a groove on the shaft end as taught by Muller for the purposes discussed above.

Regarding claims 2-4, it is noted that Hishida et al. also shows all of the limitations of the claimed invention including bearing seat (groove 212a).

Regarding claim 27, it is noted that Muller also shows all of the limitations of the claimed invention including the fan blades (23a).

8. Claims 12, 14 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller et al. (4,164,690) in view of Wrobel (5,274,289).

Regarding claim 12, Muller et al. shows a fan motor structure (Figure 3), comprising:

- A stator (26-29), which comprises:
- A fan base (11);
- A bearing assembly (36, 50, 51) mounted on the fan base; the bearing assembly including a bearing (50) and
- A rotor (25), which comprises:
- A shaft (37) fit into the bearing assembly
- A fan hub (58); and
- A sleeve (57) embedded between the shaft (37) and the fan hub (58)
- Wherein, the shaft has one end (top) protruding from a top planar surface of the fan hub to form an extension portion enclosed by and in close connection with the sleeve (57) for enhancing the connection strength between the hub and the shaft.

Muller et al. does not show the outside diameter of the sleeve being smaller than the outside diameter of the bearing of the bearing assembly.

Wrobel shows the outside diameter of the sleeve (Figure 1) being smaller than the outside diameter of the bearing (12a) of the bearing assembly for the purpose of reducing axial size.

Since Muller et al. and Wrobel are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the outside diameter of the sleeve smaller than the outside diameter of the bearing of the bearing assembly as taught by Wrobel for the purpose discussed above.

Regarding claims 14 and 23, it is noted that Muller et al. also shows all of the limitations of the claimed invention including the bearing (50), bearing seat (52), and blade (63).

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muller et al. in view of Wrobel as applied to claim 12 above, and further in view of Huang et al. (6,509,666).

Regarding claim 13, the machine of Muller et al. modified by Wrobel includes all of the limitations of the claimed invention except for the copper bushing.

Huang et al. uses copper bushing for the purpose of making a motor fan.

Since Muller et al., Wrobel, and Huang et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.



It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the bushing of copper as taught by Huang et al. for the purpose discussed above.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Information on How to Contact USPTO***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D. Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/20/05

A handwritten signature in black ink, appearing to read 'Dang Le', is positioned above the printed name and title.

**DANG LE**  
**PRIMARY EXAMINER**